

Cargo Space Organizer

CROSS REFERENCE TO RELATED APPLICATIONS

5 This application claims priority to co-pending United States Provisional Patent Application having Serial No. 60/408,833 filed 09/06/2002 entitled "Car Trunk Organizer", having a common applicant herewith.

FIELD OF THE DISCLOSURE

10 The disclosures herein relate generally to cargo space organizers and more particularly to adjustable, rigid cargo space organizers.

BACKGROUND OF THE DISCLOSURE

15 Unrestrained movement of cargo in a cargo space of a vehicle is undesirable for many reasons. For example, the cargo can slide back and forth when the vehicle is in motion, allowing the cargo to become damaged by tipping over and/or being crushed by contact with other items stored in the cargo space (e.g., tool boxes or wheel jacks). Such unrestrained movement can also distract a driver of the vehicle and can damage the vehicle. In addition to damaging the cargo stored in the cargo space, these situations can all result in unsafe driving conditions.

20 Conventional cargo space organizers include cargo nets and straight extension poles. Cargo nets are limited in their ability to prevent heavy items from sliding and to retain relatively small items. While extension poles are better suited for holding relatively heavy items and relatively small items in place, they limit movement along only one axis (e.g., fore-aft or side-to-side).

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Therefore, a cargo space organizer that overcomes limitations associated with conventional cargo retaining devices would be useful.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 depicts a cargo space organizer in accordance with an embodiment of the disclosures made herein.

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FIG. 2 is a cross sectional view taken along the line 2-2 in FIG. 1.

FIG. 3 is a cross sectional view taken along the line 3-3 in FIG. 1.

DETAILED DESCRIPTION OF THE DRAWINGS

The disclosures made herein relate to a cargo space organizer that provides restrict
5 movement of cargo within a cargo space of a vehicle, that allow for use with cargo of different
shape and size, and that can be easily moved from one vehicle to another vehicle. Cargo space
organizers in accordance with embodiments of the disclosures made herein, prevent cargo from
becoming damaged by sliding, from tipping over and/or being crushed by contact with other
items stowed in the cargo space. By eliminating unrestrained movement of cargo, the cargo is no
10 longer a distraction of the driver and damage to the vehicle from movement of the cargo is
precluded.

In one embodiment of the disclosures made herein, a cargo space organizer comprises a
first elongated member, a second elongated member and a retention assembly. The retention
15 assembly is attached to a first end of the second elongated member and is configured for
engaging a mating retention feature of the first elongated member. The retention assembly
enables the second elongated member to be attachable at a plurality of different mounted
positions between the first and second ends of the first elongated member.

20 In another embodiment of the disclosures made herein, a cargo space organizer comprises
a first elongated, a second elongated member and a plurality of extension members. The second
elongated member is repositionably attached at a first end thereof to the first elongated member.
A second end of the second elongated member is repositionable between a plurality of mounted
positions between first and second ends of the first elongated member. A first one of the
25 extension members is repositionably attached to the first end of the first elongated member. A
second one of the extension members is repositionably attached to a second end of the second
elongated member. Each one of the extension members is repositionable between a plurality of
respective positions thereby enabling an overall length of the respective elongated member to be
selectively increased or decreased.

PATENT APPLICATION

In still another embodiment of the disclosures made herein, a cargo space organizer comprises a first elongated member, a second elongated member, a retention assembly and a plurality of extension members. The retention assembly is attached to a first end of the second elongated member and is configured for engaging a mating retention feature of the first elongated member. The retention assembly enables the second elongated member to be attachable at a plurality of different mounted positions between first and second ends of the first elongated member. A first one of the extension members is repositionably attached to the first end of the first elongated member. A second one of the extension members is repositionably attached to the second end of the second elongated member. Each one of the extension members is repositionable between a plurality of respective positions thereby enabling an overall length of the respective elongated member to be selectively increased or decreased.

Turning now to specific drawings, FIG. 1 depicts a cargo space organizer 10 in accordance with an embodiment of the disclosures made herein. The cargo space organizer 10 includes a first elongated member 12, a second elongated member 14, a retention assembly 16 and a plurality of extension members 18. The first elongated member 12 has a first end 20 and a second end 22. The second elongated member 14 has a first end 24 and a second end 26.

The retention assembly 16 is attached to the first end 24 of the second elongated member 14 and enables the second elongated member 14 to be attachable at a plurality of different mounted positions between the first end 20 and the second end 22 of the first elongated member 12. The retention assembly 16 includes pins 28 configured for engaging a plurality of longitudinally-spaced paired holes 30 extending through a surface of the first elongated member 12. The pins 28 and holes 30 are jointly configured for enabling the second elongated member 14 to be selectively attachable at the plurality of different mounted positions between the first end 20 and second end 22 of the first elongated member 12.

It is contemplated herein that a single pin may replace the pair of pins and the longitudinally paired holes 30 may be replaced by longitudinally-spaced single holes. One benefit of a plurality of pins 28 is that it limits angular rotation of the first elongated member 12 with respect to the second elongated member 14. The pins 28 are examples of retention members and the holes 30 are examples of mating retention features.

Referring now to FIGS. 1 and 2, the retention assembly 16 includes a release mechanism 32 coupled to each one of the pins 28 (one pin depicted in FIG. 2). Each pin 28 is moved from an engaged position P1 (i.e., engaged with a mating one of the holes 30) to a disengaged position P2 when the release mechanism 32 is moved from an at-rest position RM1 toward a displaced position RM2. Accordingly, the release mechanism 32 enables the pins 28 to be disengaged from the holes 30.

Referring now to FIGS. 1 and 3, the extension members 18 are repositionably attached at the ends of a respective one of the elongated member (12, 14). The extension members 18 are configured to telescope along the end of the respective one of the elongated members (12, 14). A spring-loaded pin 34 is mounted on each one of the extension members 18. A plurality of spaced-apart holes 36 extend through a surface of each one of the elongated members extension members (12, 14) where the respective extension member 18 is mounted.

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The spaced apart holes 36 are selectively engagable by the respective spring-loaded pin 34. In this manner, the extension members 18 enable an overall length of the respective elongated member to be selectively increased or decreased. The spring-loaded pin 34 and the plurality of holes 36 jointly depict a means for enabling the extension members 18 to be independently repositioned and secured relative to a longitudinal axis of the respective elongated member.

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It is contemplated herein that the spring-loaded pin 34 may be mounted on the respective one of the elongated members (12, 14) and the plurality of mating holes 36 may extend through

the respective extension member 18 (e.g., the extension member sliding over the respective elongated member rather than within it). It is also contemplated herein that the extension members 18 may be biased outward (e.g., via a spring pushing the extension member outward) in addition to being selectively adjustable.

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It is contemplated herein that primary components of the elongated member, extension members and release mechanisms in accordance with embodiments of the disclosures made herein may be made from any one of a variety of known commercially available materials. Examples of such materials include filled and unfilled polymers. Such known materials may be processed using known processing techniques such as injection molding, extrusion, vacuum forming, milling, turning and the like.

In the preceding detailed description, reference has been made to the accompanying drawings that form a part hereof, and in which are shown by way of illustration specific embodiments in which the invention may be practiced. These embodiments, and certain variants thereof, have been described in sufficient detail to enable those skilled in the art to practice the invention. To avoid unnecessary detail, the description omits certain information known to those skilled in the art. The preceding detailed description is, therefore, not intended to be limited to the specific forms set forth herein, but on the contrary, it is intended to cover such alternatives, modifications, and equivalents, as can be reasonably included within the spirit and scope of the appended claims.